

Figure 1

For Patent Purposes:	<hr/>
Date:	Dec. 22/03
Signature:	<u>John Doe</u>
Signature:	<u> </u>

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DRILL PIPE ROLLING FROM THE PIPE TUB TO
THE "PIPE LAUNCHER"

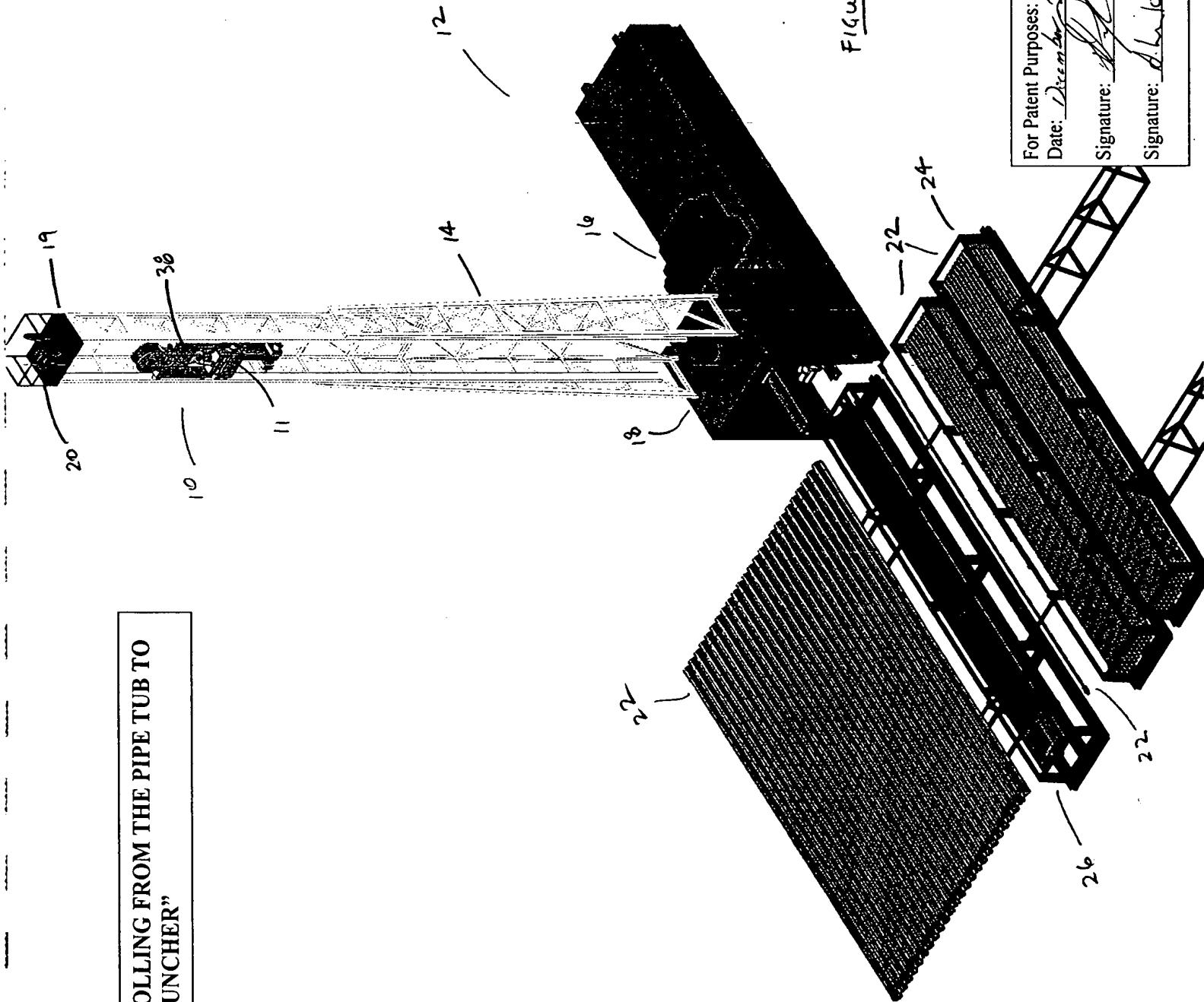


FIGURE 2

For Patent Purposes:
Date: December 2, 1972

Signature: *D. L. Clark*
Signature: *D. L. Clark*

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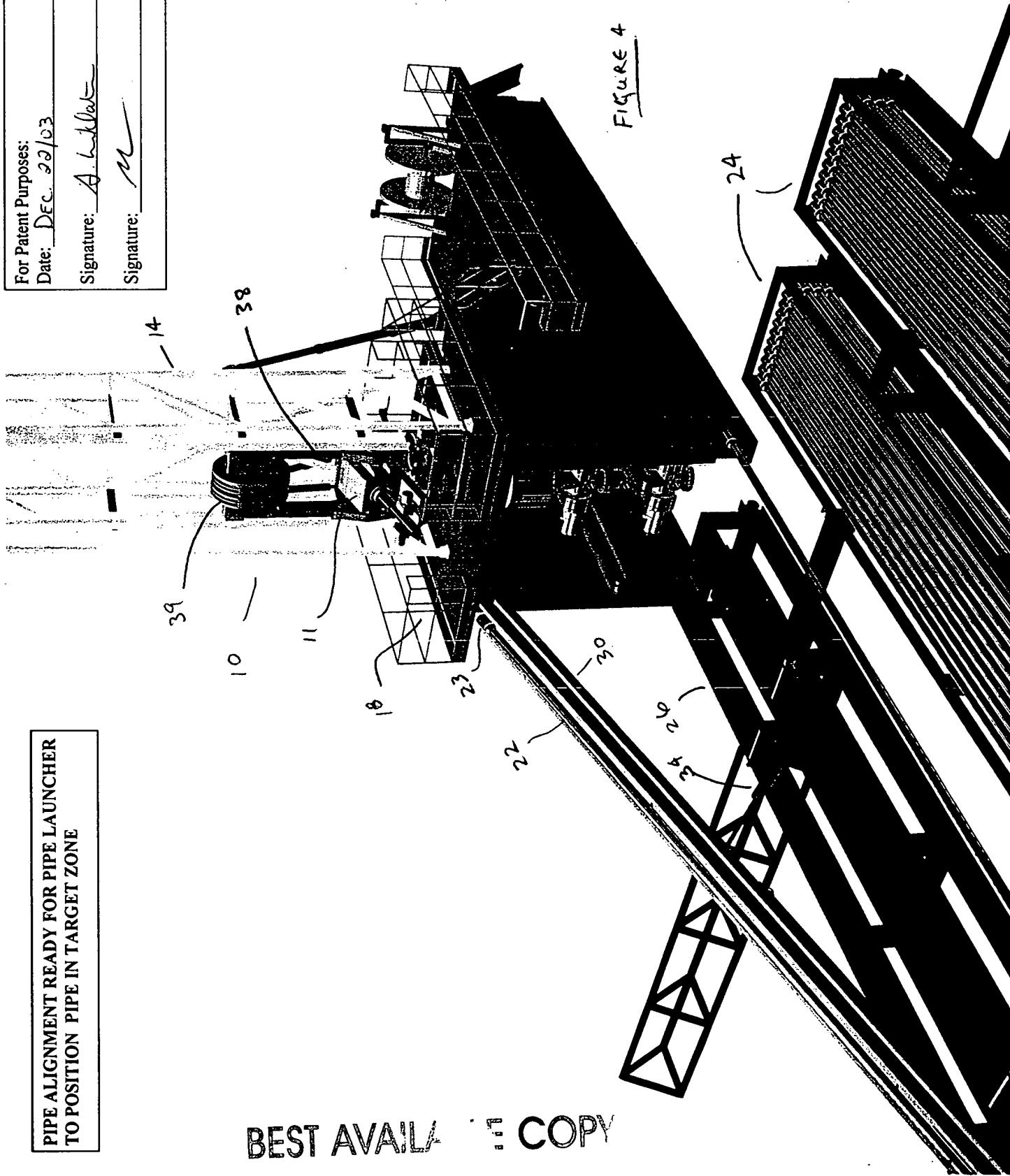
For Patent Purposes:	Date: <u>Dec. 22/03</u>
Signature: <u>A. L. J.</u>	
Signature: <u>✓</u>	



PIPE ALIGNMENT READY FOR PIPE LAUNCHER
TO POSITION PIPE IN TARGET ZONE

For Patent Purposes:
Date: DEC. 32/03
Signature: A. Balkan
Signature: M.

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PIPE LAUNCHERS RAM PUSHING PIPE UPWARD INTO THE TARGET ZONE

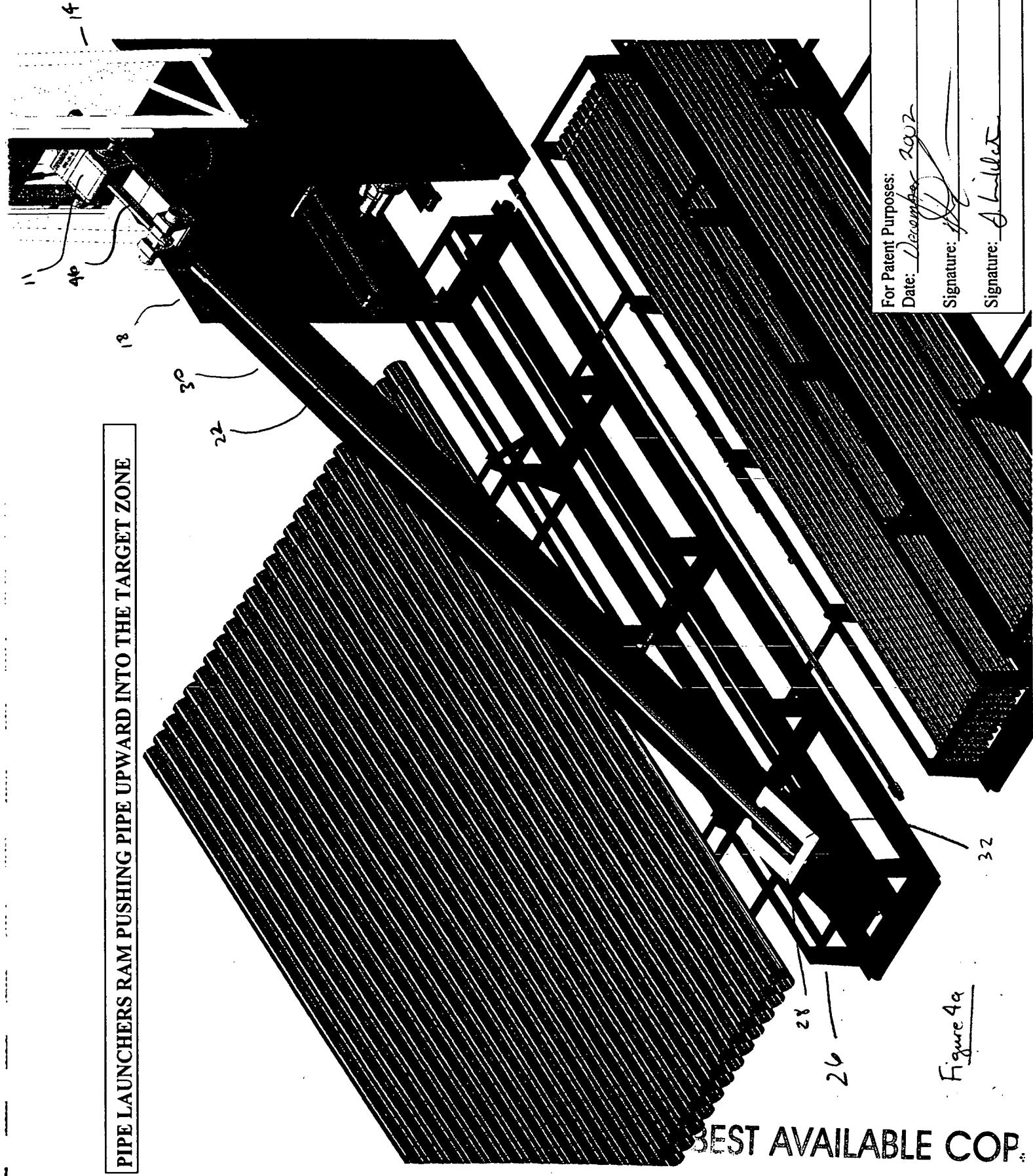
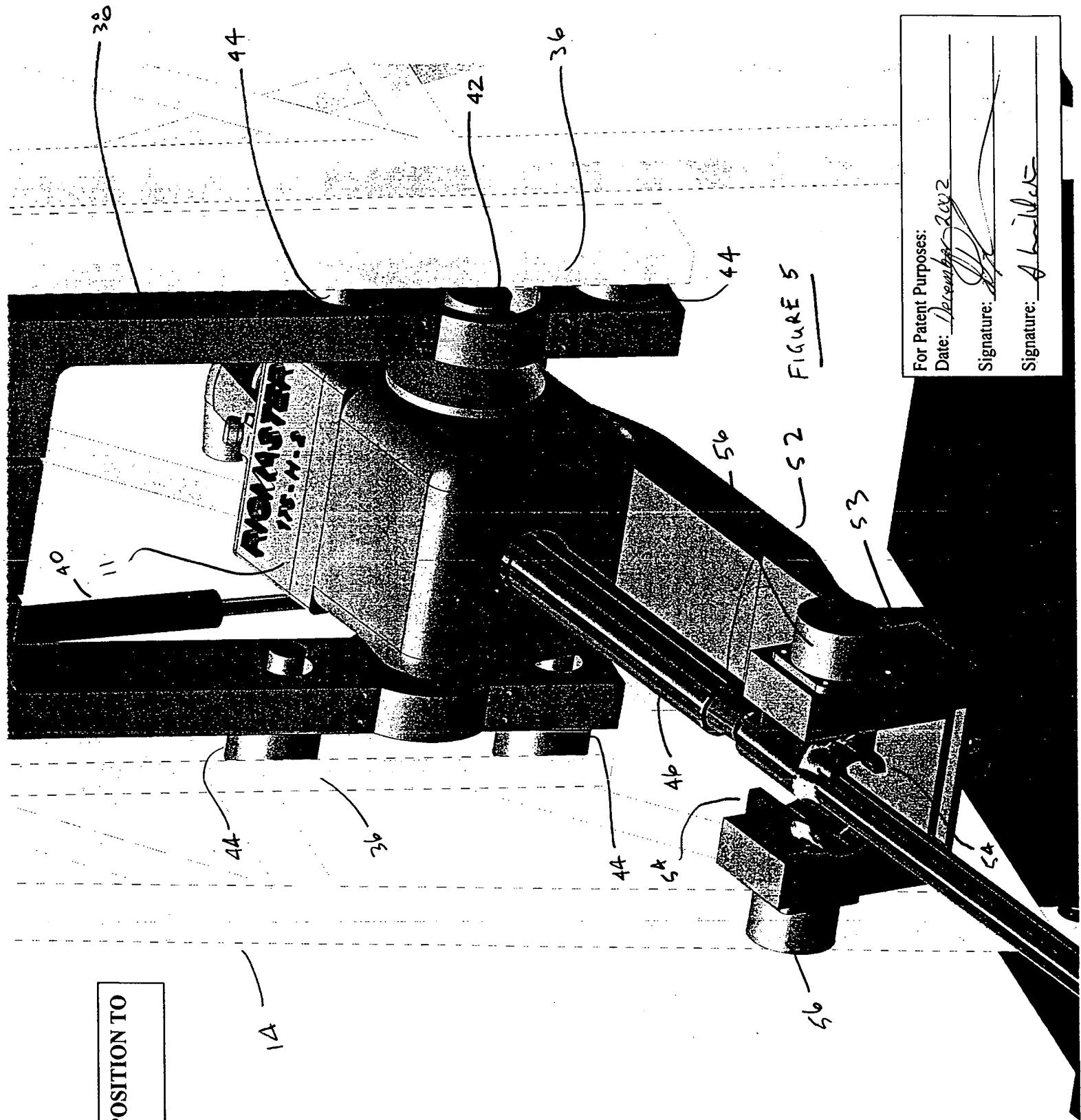


Figure 4a

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TOP DRIVE IN POSITION TO
GRIP TUBULAR



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For Patent Purposes:

Date: December 2002

Signature:

Signature:



GRIPPER IN ACTION, CLAMPED TO
TOOL JOINT, READY TO SLIDE UPWARD
TO MEET THE SLOWLY ROTATING TOP
DRIVE QUILL

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FIGURE 6 22

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Date: Dec. 22/03

Signature: A. L. Winkler

Signature: M

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CONNECTION COMPLETED, GRIPPER
REMAINS LOCKED ON FOR HOISTING

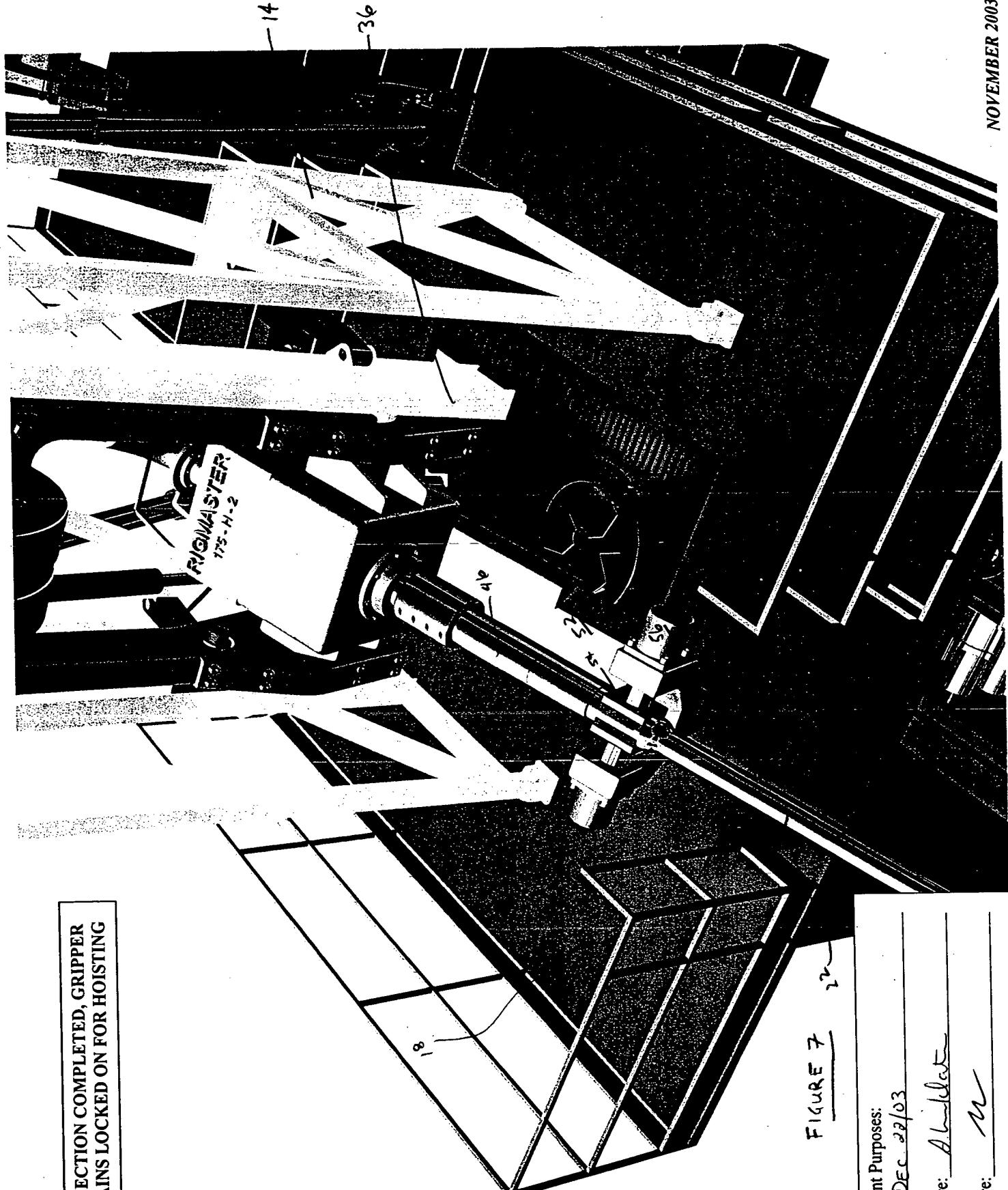


FIGURE 7

For Patent Purposes:
Date: DEC 22/01

Signature: Abdul Latif

Signature:

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1

GOING UP, DRAGGING THE PIPE WITH THE TOP DRIVE ARTICULATING RAMS SET TO THE FLOAT POSITION

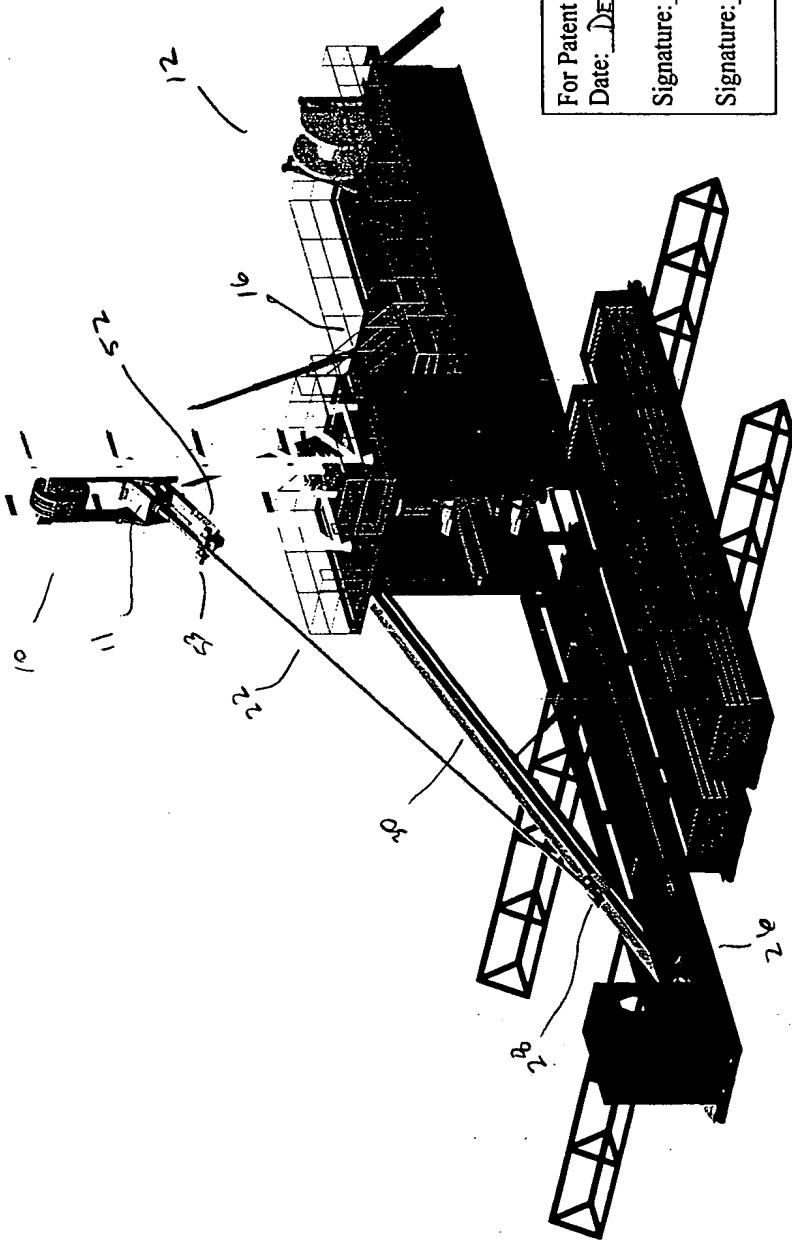
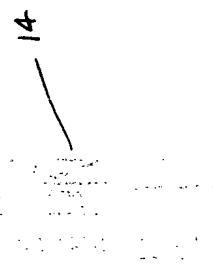


Figure 8

For Patent Purposes:
Date: Dec. 22/03

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Date: DEC. 22/03

Signature: A. L. J. Clark

Signature:

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DRILL PIPE READY TO BREAK FREE OF THE DOLLY AND SWING
GENTLY INTO THE VERTICAL POSITION

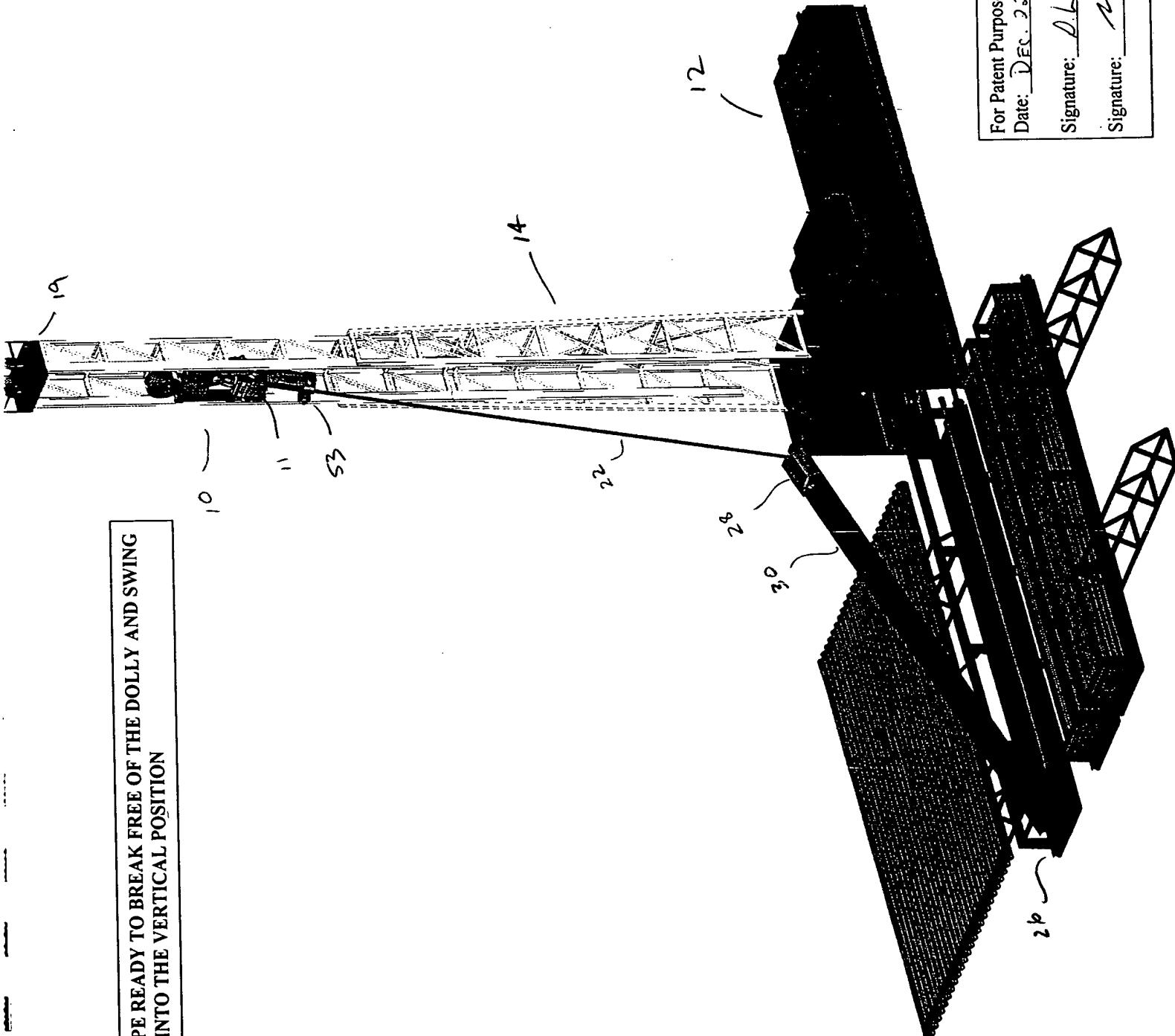


FIGURE 9

For Patent Purposes:	<u>Dec. 22/63</u>
Date:	<u>Dec. 22/63</u>
Signature:	<u>H. L. Lutz</u>
Signature:	<u>ni</u>

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DRILL PIPE IN DRILLING POSITION, GRIPPER RELEASED

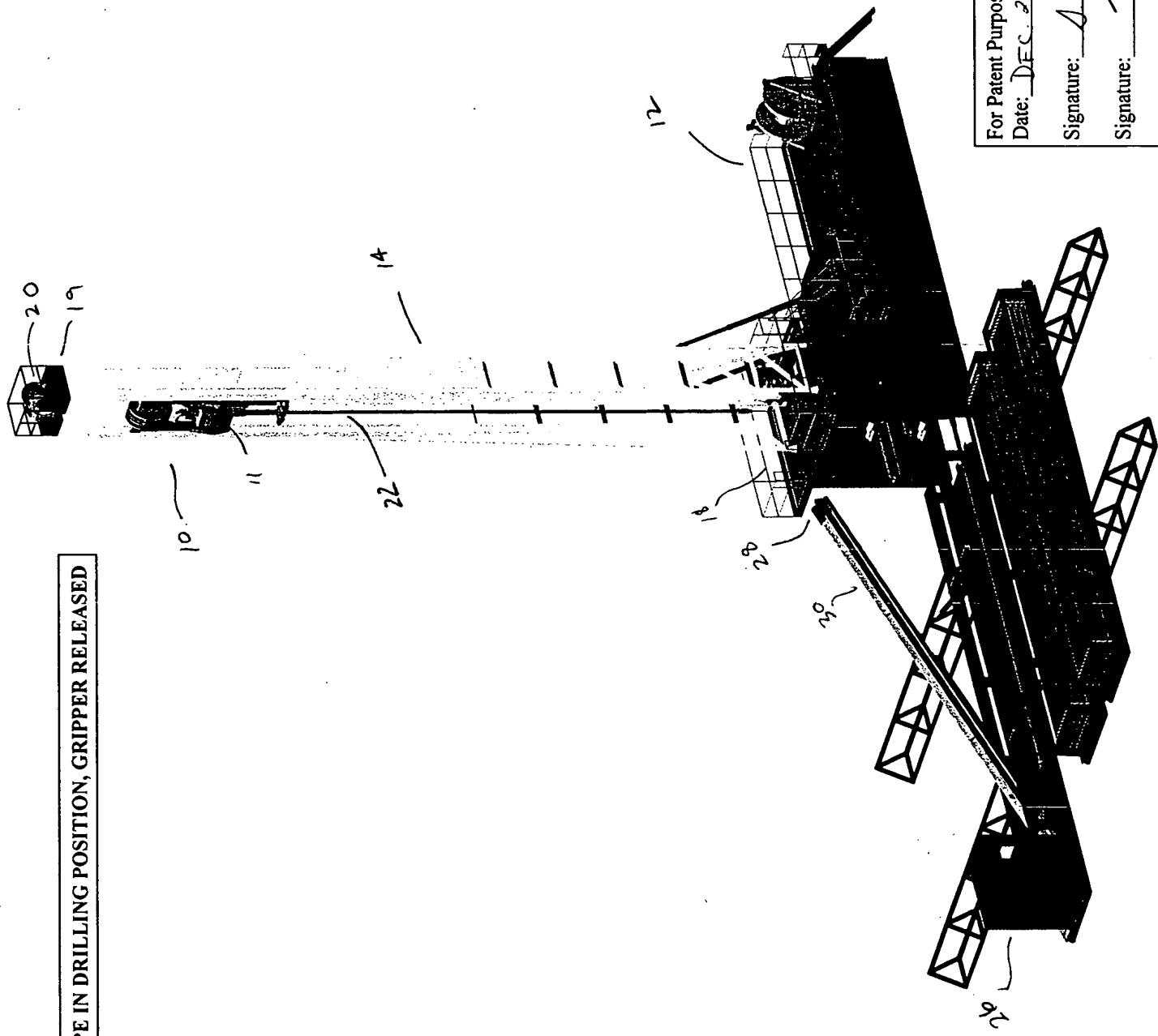


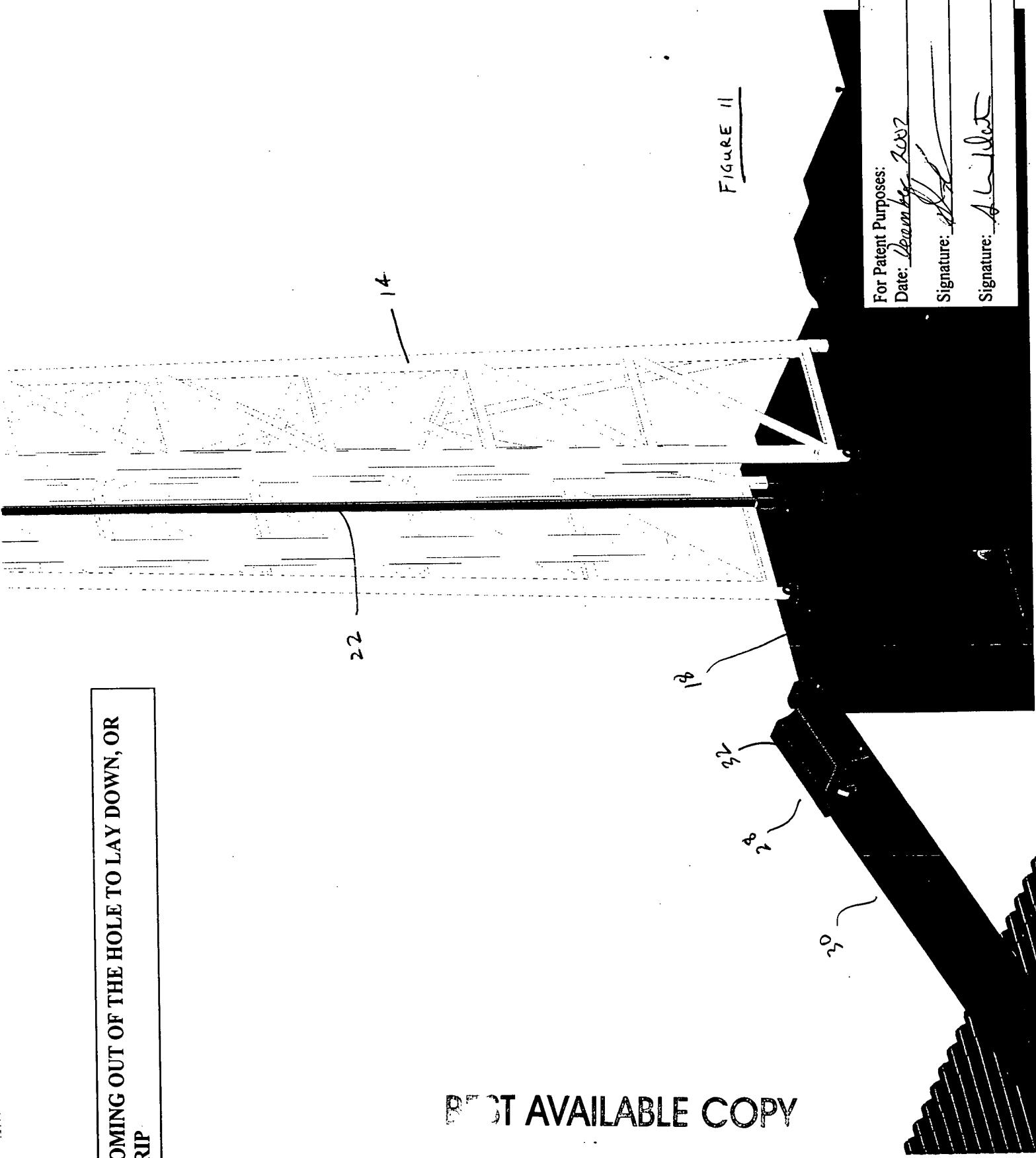
FIGURE 10

For Patient Purposes:	Date: <u>Dec. 20/03</u>
Signature: <u>John Black</u>	Signature: <u> </u>

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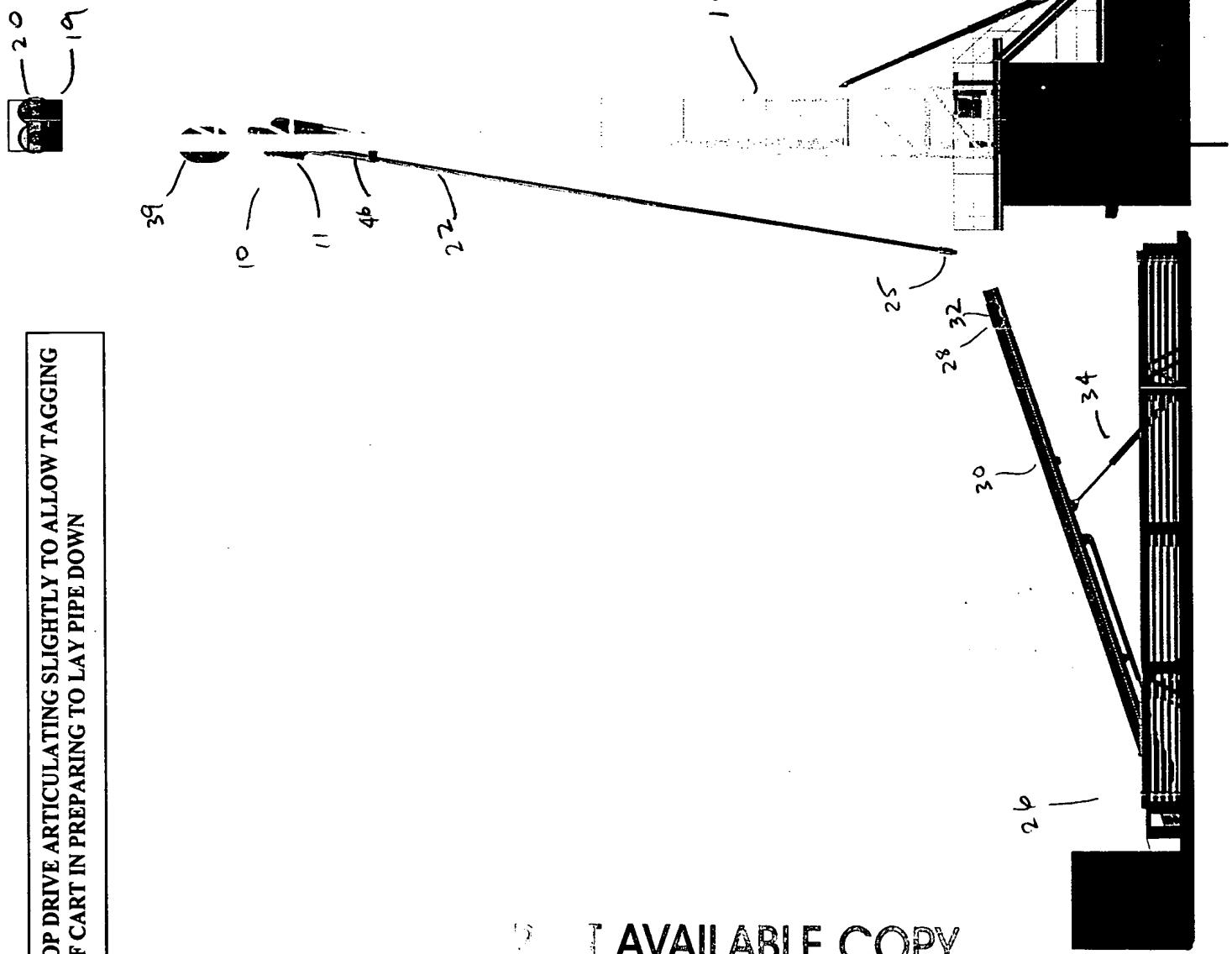
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COMING OUT OF THE HOLE TO LAY DOWN, OR
TRIP



TOP DRIVE ARTICULATING SLIGHTLY TO ALLOW TAGGING
OF CART IN PREPARING TO LAY PIPE DOWN

For Patent Purposes:	_____
Date:	DEC 23/03
Signature:	<u>A. L. J. O. C.</u>
Signature:	<u>M</u>



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TOP DRIVE ARTICULATED TO SWING PIPE ONTO
THE DOLLY

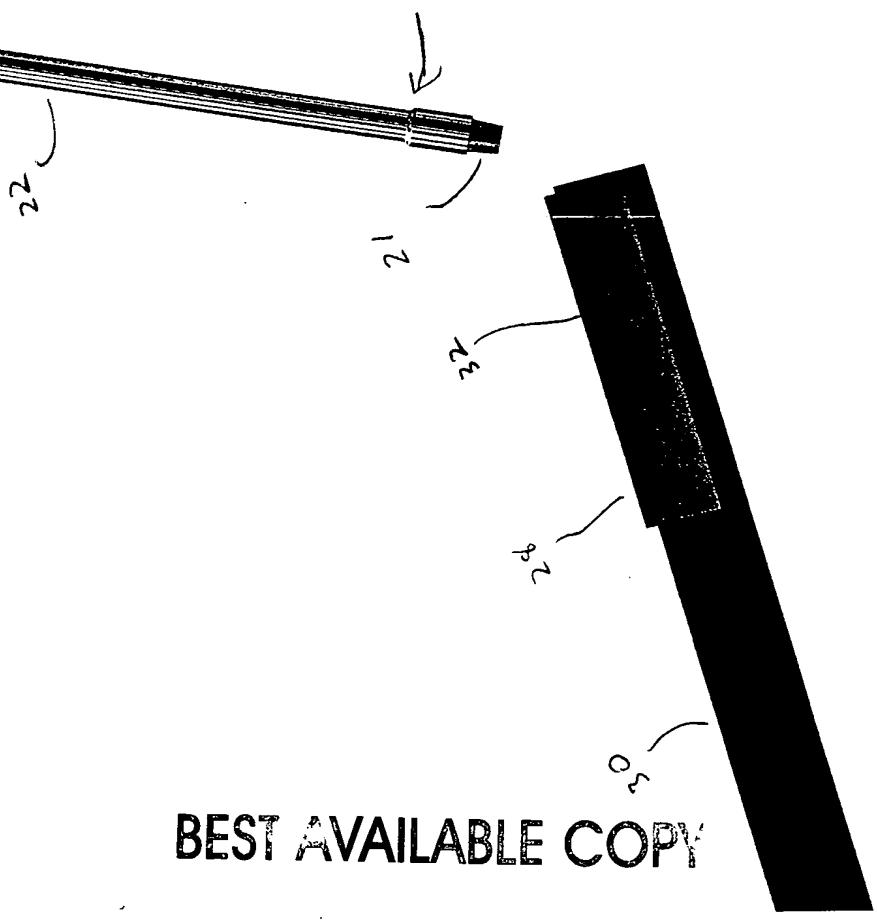


FIGURE 13

For Patent Purposes:
Date: December 2012

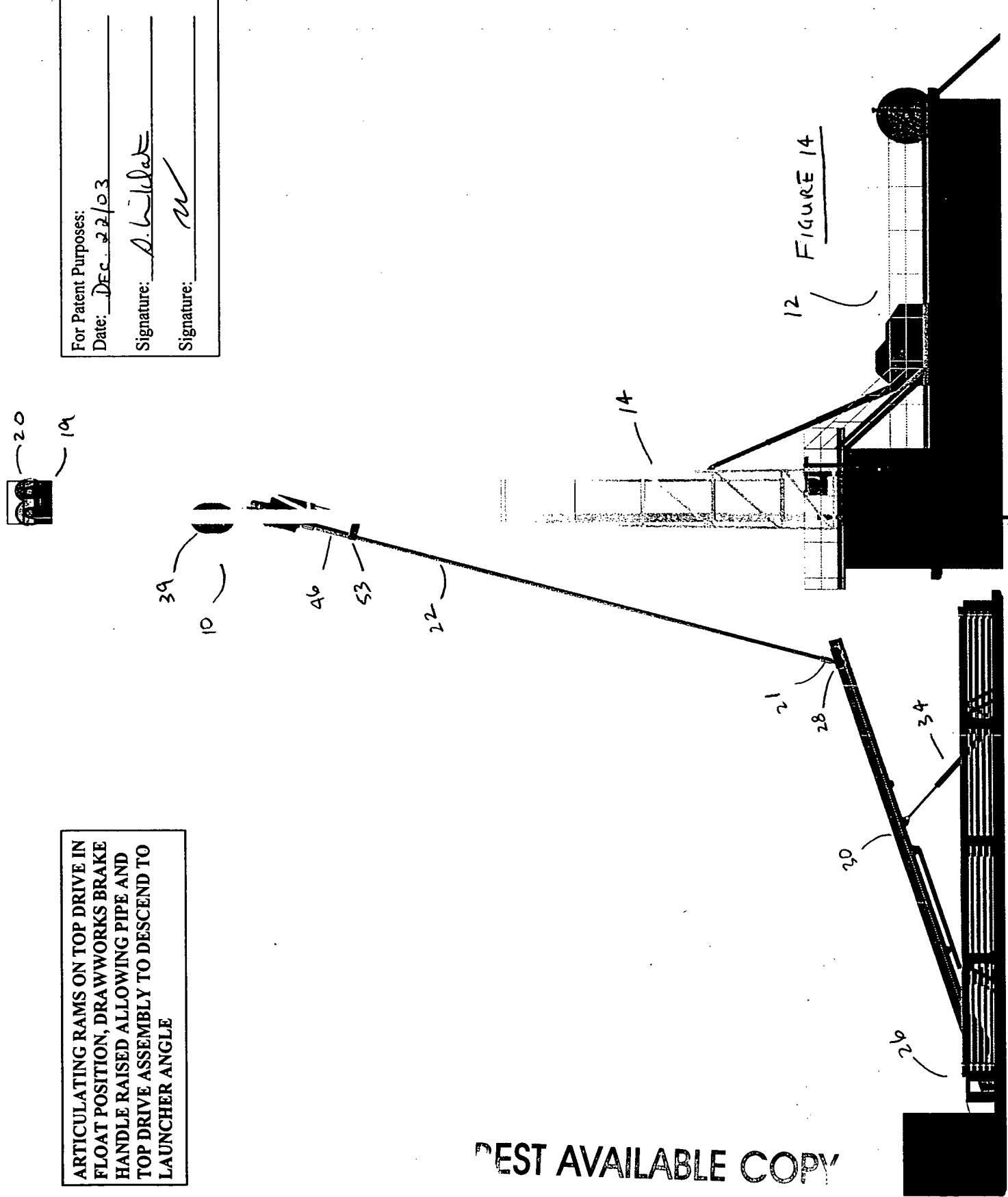
Signature: 

Signature: 

ARTICULATING RAMS ON TOP DRIVE IN FLOAT POSITION, DRAWWORKS BRAKE HANDLE RAISED ALLOWING PIPE AND TOP DRIVE ASSEMBLY TO DESCEND TO LAUNCHER ANGLE

For Patent Purposes:
Date: Dec. 22/
Signature: A. L.

12 / Figure 14



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BRAKE HANDLE UP TO SET PIPE IN
DOLLY IN PREP TO LAY DOWN

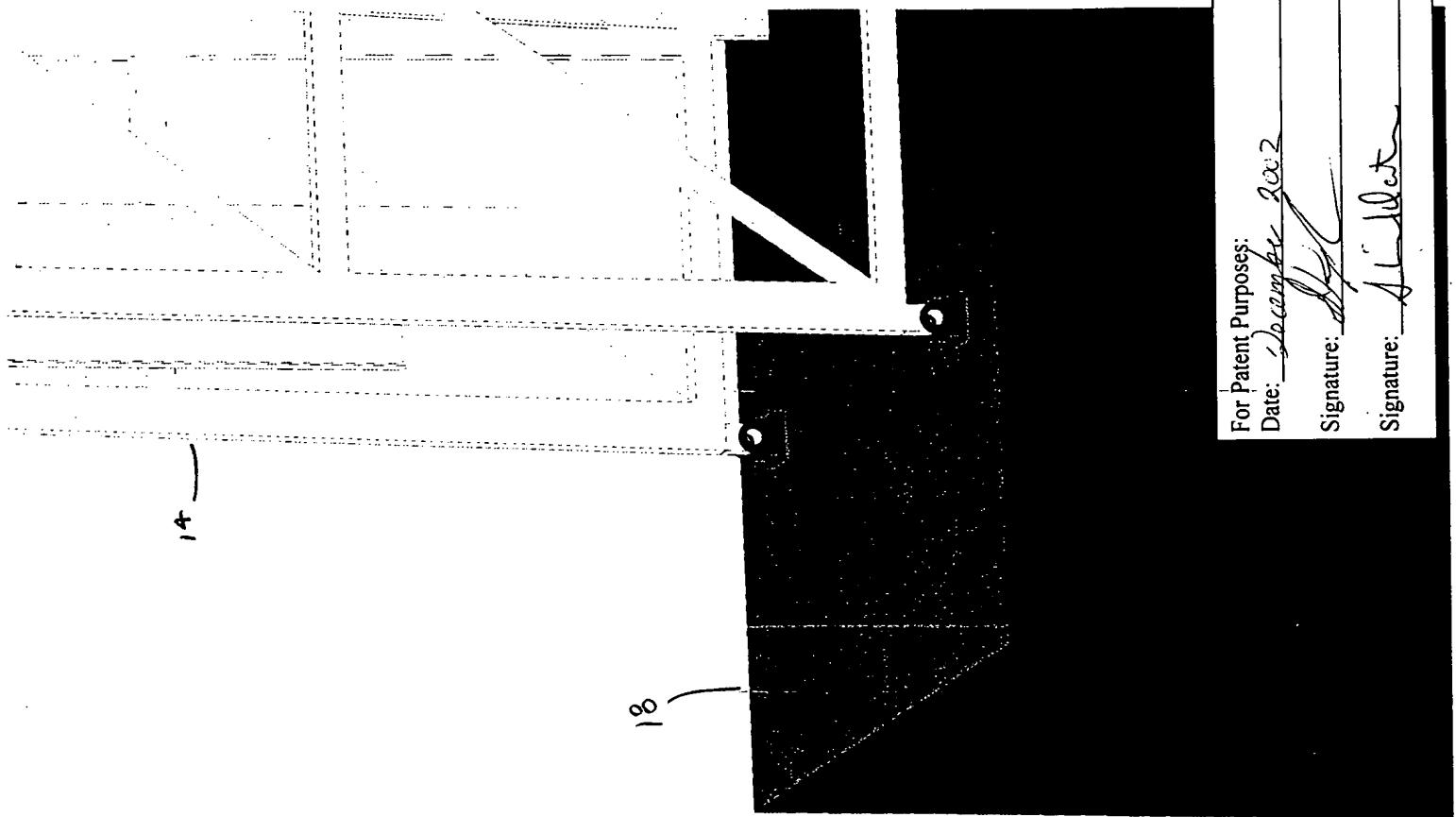


FIGURE 14

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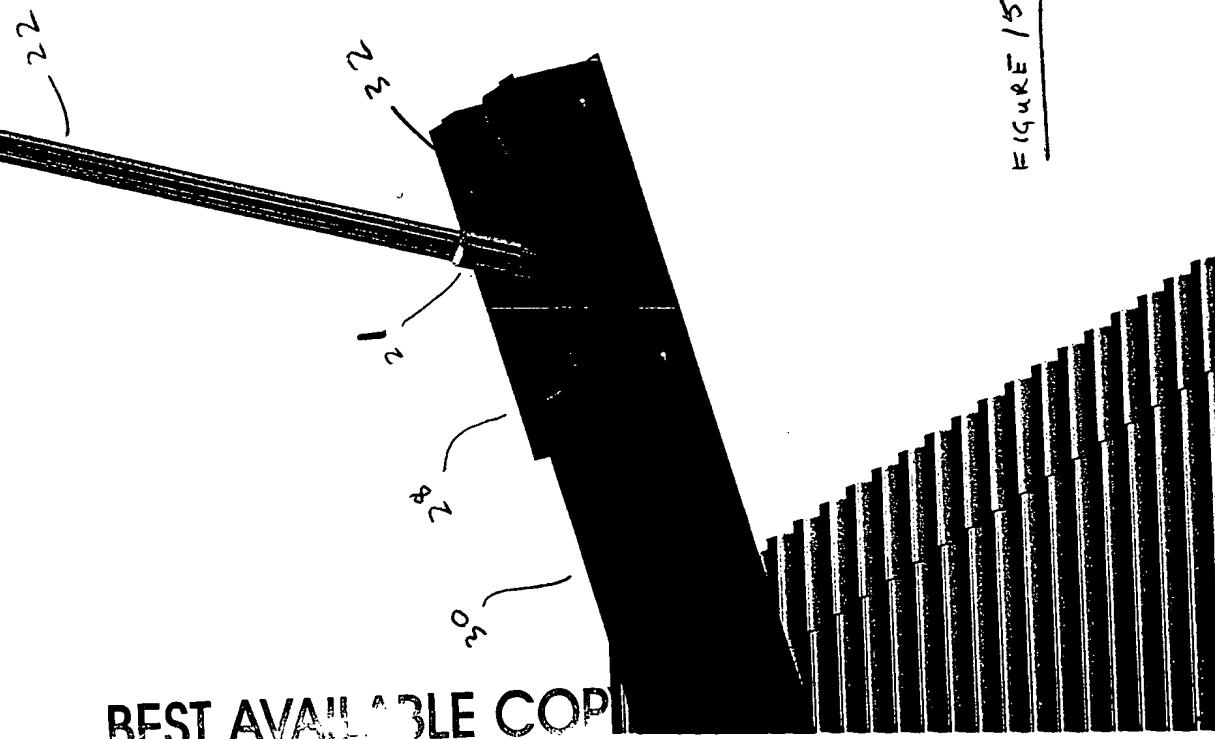
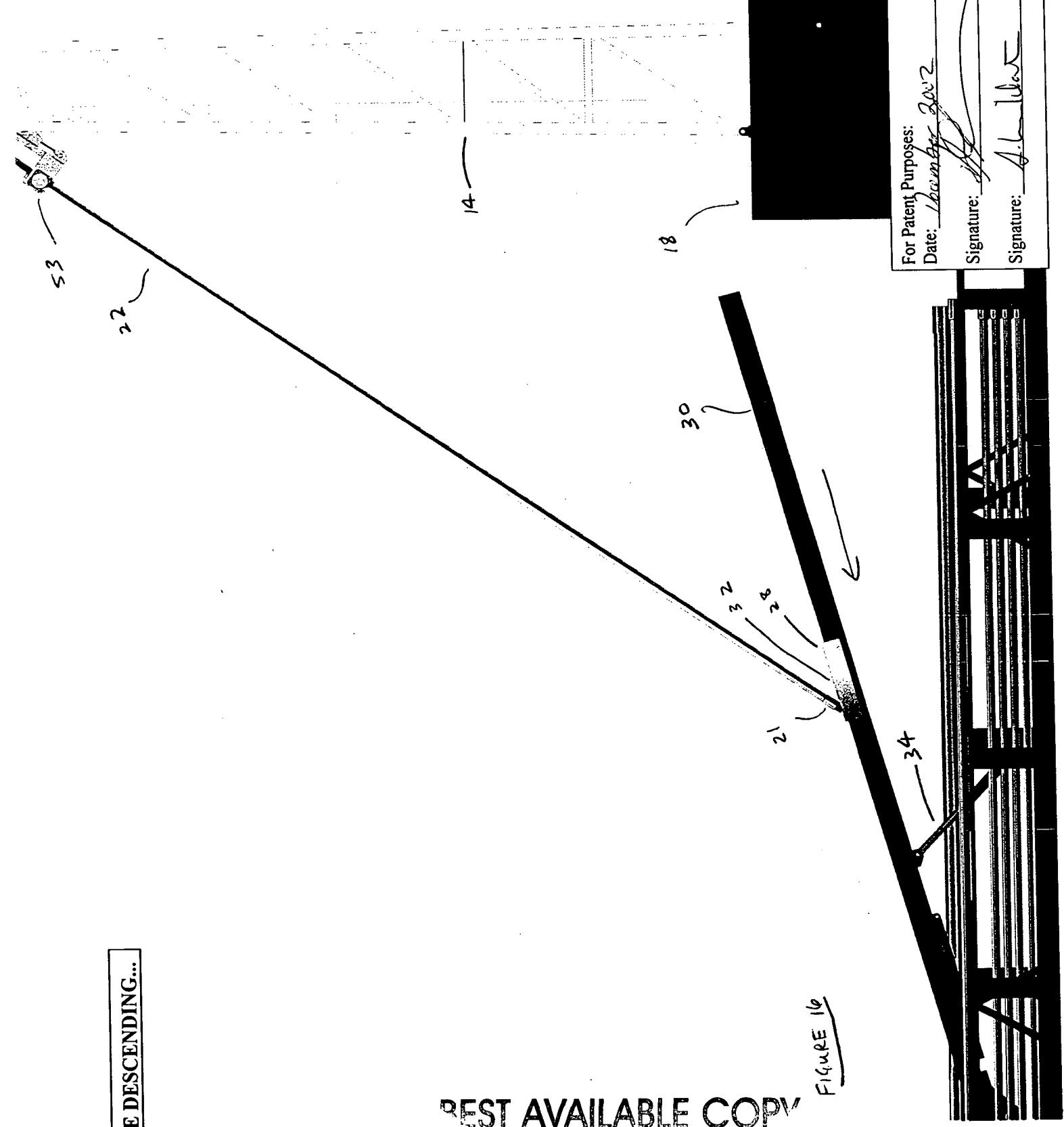


FIGURE 15

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Signature:	<input type="text"/>
Signature:	<input type="text"/>

PIPE DESCENDING...

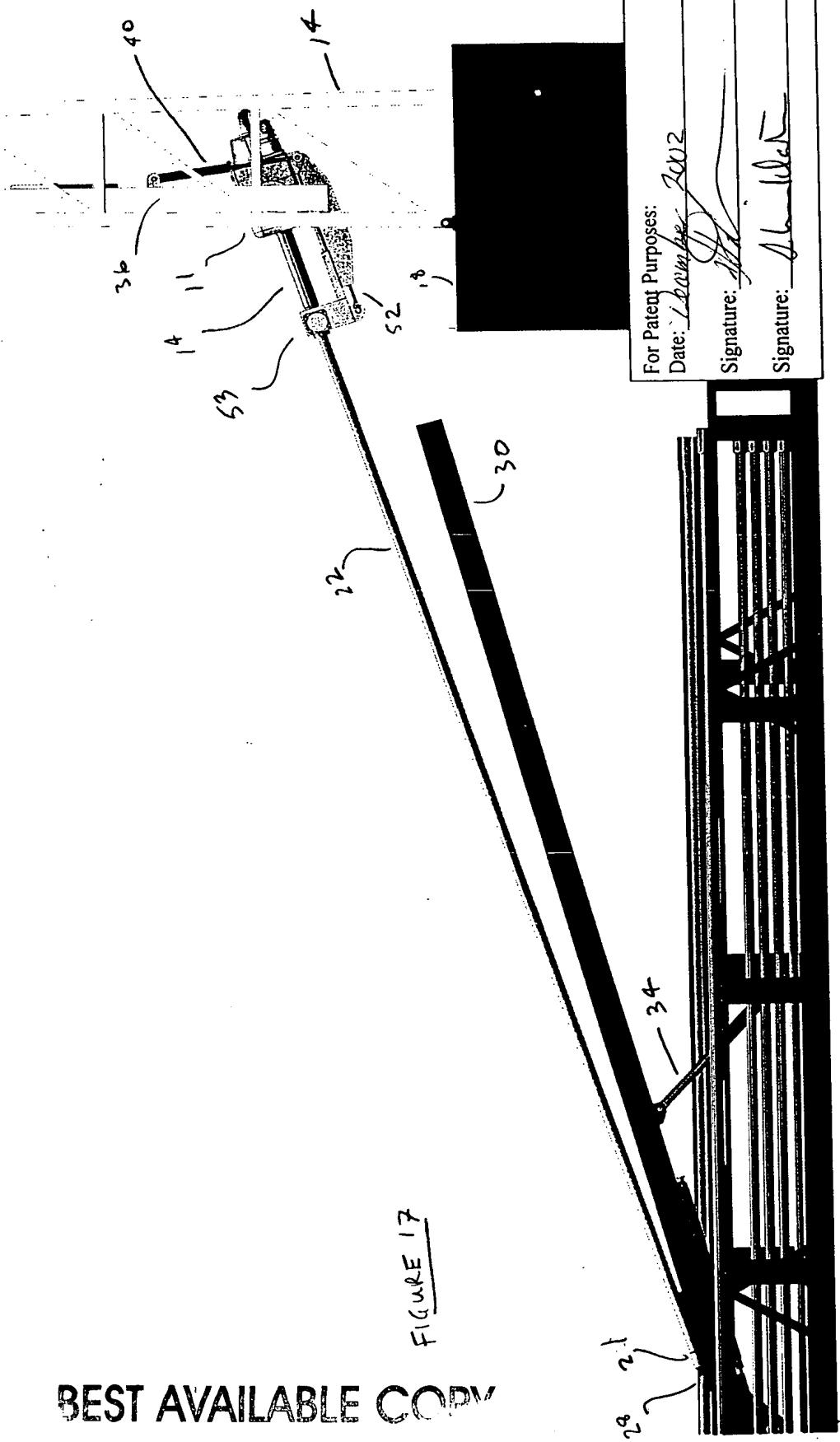


For Patent Purposes:
Date: January 2002

Signature: *J.L. West*

Signature: *J.L. West*

PIPE BEING LOWERED ONTO PIPE LAUNCHER TROUGH FOR
PLACEMENT BACK INTO TUBS OR RACKS



For Patent Purposes:
Date: January 2012

Signature: John Doe

Signature: John Doe